Agnes Bauer

Market Research – System Integrators in Europe

From the viewpoint of Bosch Security Systems

Bachelor Thesis

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Thesis Abstract

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The purpose of this study is to analyse the European security system integrator market and identify potential key account companies for Bosch Security Systems.

The theoretical part of the thesis provides the essential background information about the security system integrator market, Bosch Security Systems, and the research methodology used. The empirical part analyses the top ten security system integrators on the local markets based on their estimated market shares. This method allows us to see whether there are some companies on the market that can become potential key account partners for Bosch Security Systems.

The thesis was written during the time of my internship at Bosch Security Systems in Munich, Germany. Being part of the key account management team allows me to observe the processes and understand the principles of key account management. The contribution of the local country managers and the key account management team was essential in order complete the study successfully. For that reason, I would like to dedicate this thesis to the key account management team.

Keywords: market research, competitive analysis, security, system integrators

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Abbreviations

KAM	Key Account Management
EMEA	Europe, Middle East and Africa
UAE	United Arab Emirates
HVAC	Heating Ventilation and Air Conditioning
IP	Internet Protocol
KA	Key Account
HVAC	Heating, Ventilation and Air Conditioning
CRM	Customer Relationship Management
ABS	Anti Lock Braking System

1 Introduction

In our society, the provision of security and detection have become a vital component in our everyday life. CCTV cameras are in our immediate and extended environment have become commonplace. Our “communities” are under 24/7 surveillance; from Industrial (Manufacturing Plants, Oil and Gas Pipelines) to Commercial Properties (Retail Chains, Blue Chip Corporate, Public Transportation, Aviation) to Private (High profile residences, our own front doors) . As demand to secure our investments has increased, therefore so has the demand in the technology offered.

The Security System division of Bosch is a pioneer and global supplier of security and safety solutions. It effectively operates in all continents in more than 50 countries. Bosch has a very strong background in engineering and has its fundamental roots in the automotive industry which gives the added advantage of being technology and precision driven in all markets it operates in. To further satisfy markets needs, add value to its technology driven products. Bosch invested in a Key Account Management team. This thesis was written during my internship working for the KAM team of Bosch in Grasbrunn, Germany.

The purpose of the thesis is to provide an overlook of the Security System Integrator market in Europe and understand the key players in each sub region. The analysis of the collected data and information will help to identify the potential partners for Bosch.

The core of thesis is based on a research from IHS, Security Systems Integration –World- 2014 Edition. This research is considered as an example and guideline for my thesis. The fundamental tool of the thesis is qualitative research. The data was gathered for the market research while interviewing the local country managers one by one. Their expertise gave sufficient information on how the competitive environment of the security system integrators looks like in the sub regions. The gathered data was analysed with the method of competitive analyses in order to identify the potential key account partners for Bosch Security Systems.

2 Background information

A thesis should be complied in a manner that is comprehensive, understandable and concise for its target audience. As the audience probably does not have an extensive understanding of the subject matter, this chapter will include all the background information that is essential in order to understand the key elements of the research.

2.1 Bosch Group

Bosch has a long standing history. The company dates back to 15 November 1886, when Robert Bosch opened his ”Workshop for Precision Mechanics” and “Electrical Engineering” in Stuttgart. A year later, after the first successful installation, The Bosch low-voltage ignition device in a motor vehicle was accomplished. The success was evadable: the company had grown through the borders of Germany in an extremely early stage. In 1898 the first sales office was established in the United Kingdom, where upon seven years later the first manufacturing site was opened in Paris. After becoming successful within Europe, Bosch has expanded its production to the American continent. The first production plant was operational in 1912 in Springfield, MA. After the geographic expansion, Bosch has also expanded its business scope. Up till 1932 two new business lines were launched: the automotive lightning system and the power tool production that launched the first power drill and Bosch hammer. Ten years later Robert Bosch passed away. It was then decided in 1964 for the company to become a non-profit organisation, there was then the birth of the Robert-Bosch Stiftung GmbH, which acquired a majority stake in Robert Bosch GmbH. In the same year Bosch and Siemens started their great co-operation in the field of home appliance production. The result of the co-operation is the establishment of the Bosch-Siemens Hausgeräte GmbH. From the onset of this joint venture, the two giants of industry have sustained market leadership. At the end of the 1970’s Bosch started the production of ABS (Anti lock braking system) for automotive industry. In 2003 with the launch of the Ixo cordless drill/driver with rechargeable battery Bosch reforms the market of the power tools. During the course of the last five years Bosch have started series production of full parallel hybrid powertrain for passenger cars. The production of drive components for e-bikes and acquired the SPX Corporation and established a joint venture of Lithium Energy and Power GmbH & Co. KG to develop high-performance rechargeable batteries for electric vehicles. (Bosch Today 2014)

For over a century the company was led by the philosophy of Robert Bosch:*"It has always been an unbearable thought to me that someone could inspect one of my products and find it inferior in a way. For that reason I have constantly striven to produce products which withstand the closest scrutiny – products which prove themselves superior in every respect."*(Robert Bosch 1918) This philosophy and strive for excellence made it possible that today Bosch is a leading supplier of technology and services as well a worldwide known brand name.

Today the Bosch Group consists of 360 subsidiaries and represented in 150 countries. Its operation is divided into four sectors: Automotive Technology, Industrial Technology, Consumer Goods and Energy and Building Technology.(Figure 1)

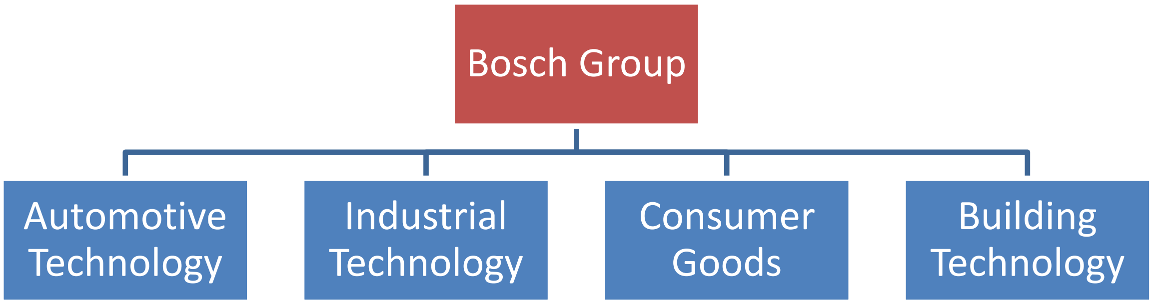


Figure 1Bosch Group divisions

The Automotive Technology sector is one of the world largest automotive suppliers as well the most profitable segment of the Group. The business scope of the sector is complex; it produces e.g. fuel-injection systems for internal combustion engines, peripheral devices for powertrain control and active and passive vehicle safety systems. Today each and every automobile has a Bosch component. Industrial Technology is the second biggest sector of the company which includes the Drive and Control division, a supplier of the mechanical engineering sector, and the Packaging Technology division which provides integrated packaging process engineering solutions for numerous industries. The Customer Goods business sector is very well known by the mass. Its product portfolio includes professional and DIY tools and home appliances made by the BSH Bosch und Siemens Hausgeräte GmbH joint venture. Ten percent of the total sales in 2013 had accounted by the Building Technology sector. Thermotechnology- and Security Systems divisions together constitute the whole sector. The four main units altogether employ almost 300 000 people, run 225 manufacturing sites and have accounted more than 46 billion Euros sales last year.

2.1.1 Bosch Security Systems

Bosch Security Systems is part of the Building Technology sector and probably one of the youngest divisions of the Bosch Group. The name, Bosch Sicherheitssysteme GmbH has been operational since 2002 but its history dates back to the foundation of its precursor company Hanseatische Notruf AG in 1920.(Technology and innovation at Bosch Outline of product history 2009) The first milestone of the sensor development was the launch of the first solid-state modulated LED beam detector in 1969. A decade later the company has put on the market the body heat motion sensing, so called PIR, technology.(Motion Detectors- Made by Bosch 2010) From 1995 the company starts to run under the Bosch name as Bosch Telecom GmbH. Six years later it completes its first acquisitions with Detection Systems Inc, and from 2002 the growth of Bosch Security Systems continues exponentially. Till 2007 amongst others it acquires Phillips Communication Security Imaging B.V., Micos GmbH, ADC Technologies International Pte Ltd and TeleAlarm Group. With the acquisition of Phillips Communications Bosch has entered to the international market. All these steps and milestones lead to today’s great success of Bosch Security Systems that is a leading supplier of integrated solutions for the safety, security and communication market. (Innovative products, services and solutions for security, safety and communications – internal document 2014)

Figure 2: Key facts 2013 (Innovative products, services and solutions for security, safety and communications – internal document 2014)

Bosch Security Systems division plays an important role within the Bosch Group since it accounted for 1,5 billion Euros sales in 2013 which is 3,2% of the total sales of the Group. Worldwide, 12 000 associates are employed by the division. Five manufacturing sites, in Germany, Portugal, China, Mexico and the USA, are providing the goods to the distribution partners in more than 150 countries. Geographically Bosch Security Systems can be divided into five big regions: North America, South America, Asia-Pacific, China and EMEA (Europe, Middle-East and Africa). The global headquarter of the division is situated in Munich however it is not equivalent with the EMEA region's that is situated in Eindhoven. Since it is a Europe based company it is not surprising that 65% of the sales is accounted by the EMEA organisation. The other 35% is equally split between the Americas and Asia Pacific regions.

2.1.2 Divisions of Bosch Security Systems

The Security Systems Division can be divided into three business areas: Product Business, Building Security and Bosch Service Solutions.

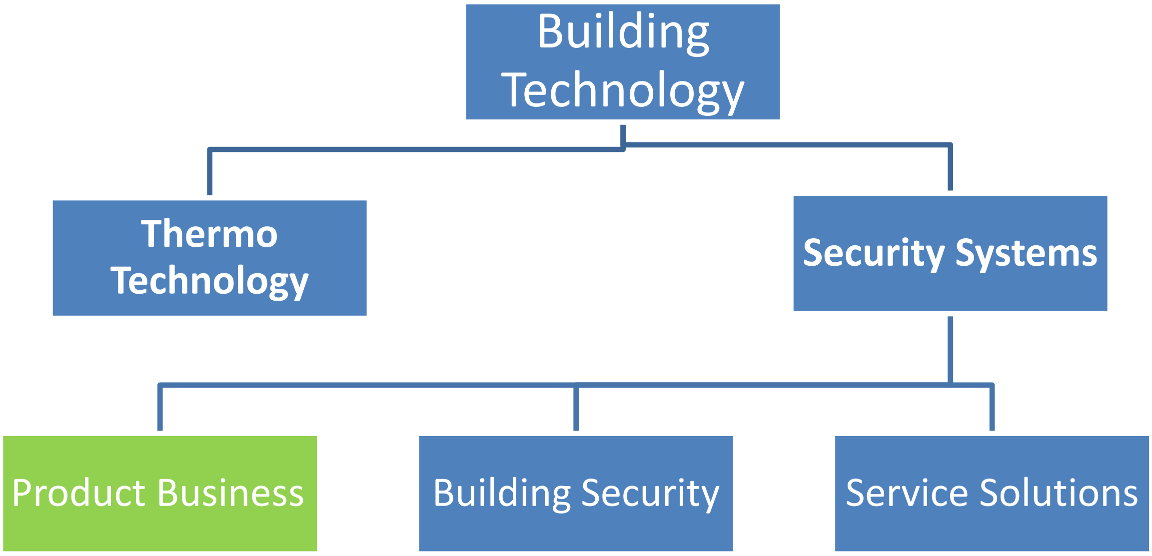


Figure 3 Structure of the Building Technology division

Bosch Building Security unit provide customised security solutions available in six branches in Germany, one in the Netherlands and one in Switzerland serving over 100 000 customers. Providing turnkey installation of low-voltage products with added value as it is illustrated on Figure 4. With long-term commitment to the partners Building Security carries along the projects from offering till maintenance. (Bosch official website 2014)

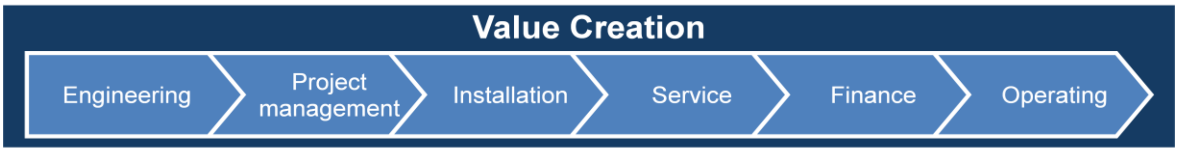


Figure 4 Value creation process offered to the customers (Innovative products, services and solutions for security, safety and communications – internal document 2014)

One of the main business areas is security, the protection of buildings, infrastructure and goods, that includes intrusion detection, video surveillance and access control systems. The other main business area is safety, the protection of human life, buildings and goods, includes fire detection, public address and voice evacuation systems. Furthermore the integration of technologies also belongs to the scope of the Building Security.

The Service Solutions area is a leading supplier in the field of Business Process Outsourcing solutions for complex, technical and process orientated, services in more than 30 languages. Additionally it implements and operates new and innovative business models in cooperation with the customers and clients. The wide scale of offered services includes mobility services, customer interaction services, infrastructure and building services and business support services.

The third business area of the Security Systems division is the Product Business. Its portfolio offers a great variety of video, communication, intrusion, fire devices and engineered solutions and software.

2.1.3 Bosch Security Product Division

The Product Business area's extensive business portfolio includes Video-Surveillance, Intrusion-Detection, Fire-Detection Systems, Access-Control, Public-Address and Evacuation Systems, Professional Audio and Conference Systems. (Bosch Security Systems official website 2014)

Video Systems	Intrusion	Fire	Access Control	Communication
				

Table 1 Product portfolio

Bosch invested time and effort to the study of Imageology- the science of surveillance. As a result of it Bosch offers a wide range of IP (Internet Protocol), Analogue and so called Hybrid (the combination of IP and analogue) cameras. The video portfolio includes dome, fixed, speciality and moving cameras, furthermore software and recording solutions, encoders and decoders, digital storages and video software. (IP Video Solutions Guide 2013) In the communication system portfolio multiple brands, such as Bosch, Dynacord, EV, RTS and Telex, are offered across multiple business segments: installed sound, public address, and conference. The intrusion detectors set the industry benchmark as they were the first product line of Bosch Security Systems. The best-in-class label stands for the minimized installation and configuration time and the reduction of service calls and false alarms. Four product series offered by Bosch tailored for the deferent demands of the regional markets. (Innovative products, services and solutions for security, safety and communications – internal document 2014) Bosch has eight decades of experience of producing fire alarm systems. These products are using very accurate detections systems in order to avoid false alarms. Furthermore they can be applied in various environments with various peripheral devices. (Successful Products for a valuable partnership 2008) The Engineered Solutions supports the international customers' needs. The focus is on the enterprise-level systems' design, tender preparation, implementation and execution together with the local partners.(Bosch Security Systems official website 2014) Beside the extensive product portfolio Bosch also offers after sales services to the customers in order to build up a long-term relationship with them. (Innovative products, services and solutions for security, safety and communications – internal document 2014)

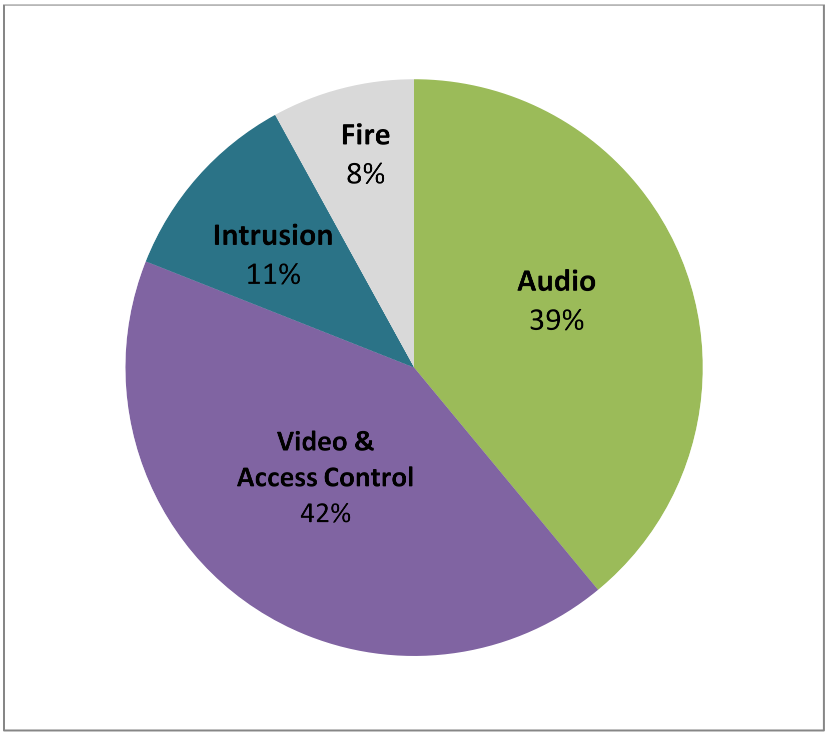


Figure 5 Bosch Security Systems global sales by domain (A view from the Bosch lens – internal document 2014)

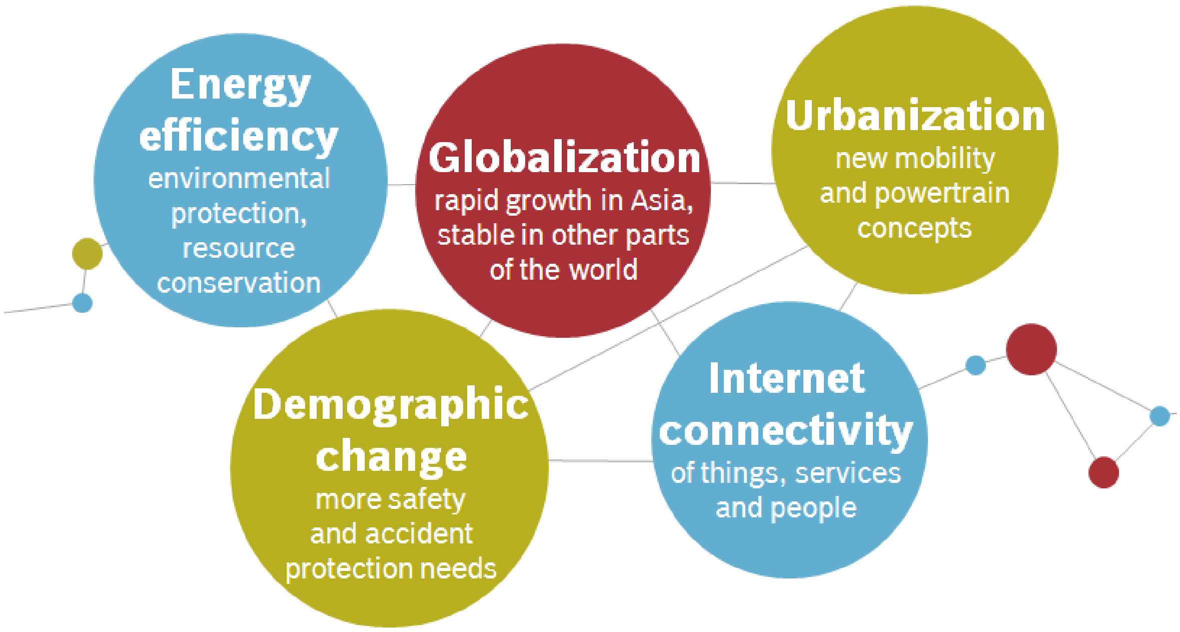
Bosch Security System's most profitable product lines are Video and Access Control. The Audio portfolio contributes significantly. Even though fire and intrusion detectors were the first product lines of the security market, together they do not account of more than 20% of the overall turnover.. The different product lines can be integrated together with heating, air conditioning and lighting systems to provide more complex services for the customers. Bosch can offer a complete Building Control Solution.(A view from the Bosch lens – internal document 2014)

2.2 Security and Safety Market

The complete Security and Safety market was worth approximately $ 58,5 billion in 2013. The American regional market is estimated to have been the largest. Asia is estimated to be the fastest-growing market and becoming the largest regional market by 2016.

Factors that influence the security and safety market, along with its continual growth; new technology, demography, level of existing infrastructure and many more. The installation market, which is directly linked to the security equipment markets, is mainly influenced by new technology developments and the economic situation. Therefore any increase or decrease affects both markets. Contrarily the service and maintenance market is particularly driven by the local regulations and less effected by the current situation of the economy. The customers' eagerness to invest in security equipment is highly dependent on the economy. Since security is not a priority field of investment in most cases. When the economical situation is subservient customers in the commercial markets are having more founds available to spend on security equipment. (IHS Technology 2014 Security System Integration – World - 2014)

The global economy tends to slowly grow although its volume might differ region by region. In the emerging markets the initial recovery from the recession was stronger than in the advanced economies. However the USA economy drives the global growth in the short term it is quite likely that in the long run China will take over the leading position. The European economy is struggling with dragging itself out of recession. The German economy is expanding, although the level of expansion is decreasing. The UK's GDP grows relatively quickly; unlikely the economic growth remains minimal in Spain, Italy and France. Despite the consistent pulling force of Germany and the UK the economy of Europe still has to face with risks that can change the growing tendency in the region. After the Euro crisis Greece is still in recession that can hold back the growth in the Euro zone. The other critical element is the current situation in Ukraine with a major deterioration in the investment climate in Russia. The economic growth is expected to be continued globally, however the process might take longer in some regions. The developed economies are mostly struggling with the reduction of their enormous amount of debts and in the same time finding their way out of recession. Since the connection between regions, advanced and emerging economies, is strong therefore the growth of both remains vulnerable in medium term. (IHS Technology 2014 Security System Integration – World - 2014)



Picture 1 Bosch Megatrends (A view from the Bosch lens – internal document 2014)

Beside the conformation of the economy there are certain megatrends that are also influencing the strategy of Bosch. Striving to create *energy efficient* products has become more and more crucial since customers often taking under consideration the power utilization of the products. Asian markets are rapidly growing therefore it is important to get into a market leader position in the region. Besides that keeping the stability in the developed economies is a key element of the strategy. Urbanization and demographic changes lead to more active mobility of the people in the growing middle and upper classes. It leads to higher demand of safety and security. During the course of the last 10 years the significance of internet connectivity has been increasing. Hence internet connectivity of things, services and people has also a direct impact on the security, safety and audio domains and offer solution opportunities which did not exist before.

2.2.1 Purchasing trends and convergence

The route from the Manufacturer to the End-user might differ. It is quite rare that an end-user purchases security equipment from the manufacturer directly. In such occasions the end user is usually a large organisation with its own installation or integration team.

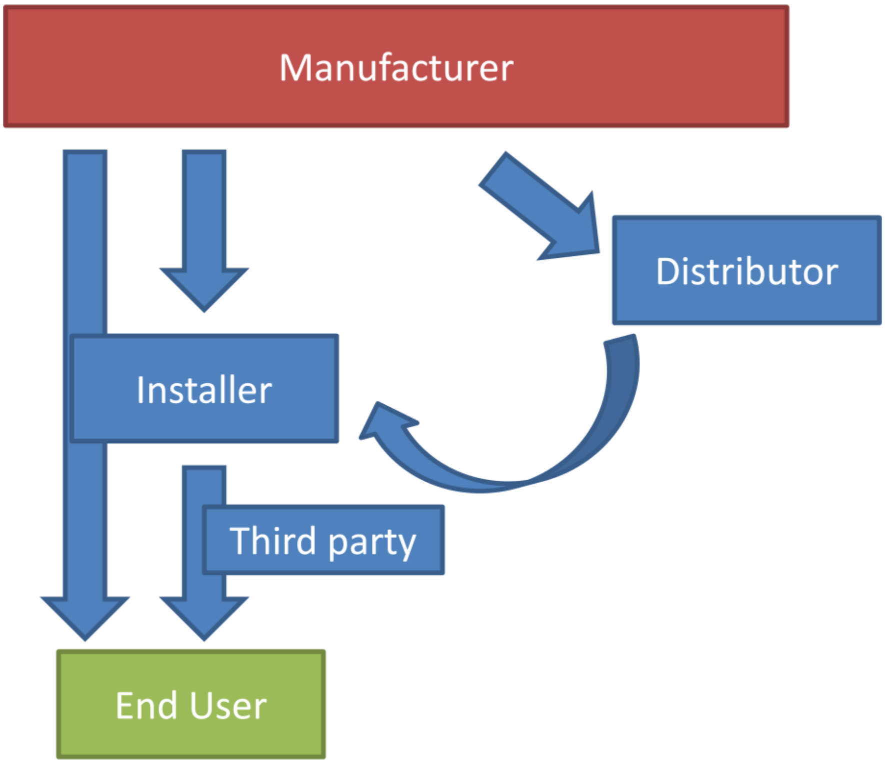


Figure 6 Purchasing Trends – Route from the Manufacturer to the End User

Most cases the end-user purchases physical security equipment from independent installers/integrators. The role of the installer/integrator varies depending on the customer's needs and the project. Therefore it is also common that a third party, prime contractors, electrical contractors and consultants, gets involved to the purchasing process. (IHS Technology 2014 Security System Integration – World - 2014)

The role of the security system installers and integrators are quite different, although there are certain functions that both are fulfilling, such as risk analysis, system analysis and dealing with contractors. The main difference is that integrators are mainly focus on larger projects and installers are dealing with smaller regional projects. (IHS Technology 2014 Security System Integration – World - 2014)

A security system can be defined as an **integrated security system** if it consists of more than one type of security product. Non-security functions, such as building management and HVAC (Heating, Ventilation and Air Conditioning) can also be integrated with security systems but they do not belong to the concept of integrated security systems. (IMS Research 2012 Security System integration – EMEA – 2012 Edition) The development of the technology lead to the possibility of network sharing between systems that is presented in one single user interface called PISM solutions (Physical Security Information Management). However it is barely used since customers still tend to ask for products and services that they desperately need. The explanation for it is that the economy’s growth is slow after the recession and it influences the customers’ eagerness of spending money on high-end technology. As a result of it, PISM is mostly used in large-end projects only. Similarly most of the video surveillance, physical access control and intruder alarm systems are installed together but they are having limited data sharing integration. Although convergence between video surveillance and physical access control tends to increase, the overall integration of systems remains still for the enterprise level projects. On the intruder alarm market the wireless technology has been introduced quite a while ago, despite customers rarely choosing it due to its pricing. One of the biggest innovation of the security and safety market in the last years was the introduction of the (NFC)Near Field Communication. (IHS Technology 2014 Security System Integration – World - 2014) NFC is a new contactless way of communication between devices. It allows the user, for example, to wave a smartphone over a device that is NFC compatible to send information without having a physical connection or a multiple steps setup. (www.nearfieldcommunication.org 2014) This technology has the potential to revolutionize the physical access control market.

2.2.2 Market trends

The market trends are always depending on the customers’ needs and the integrators’ interest. On one hand, customers want to increase their ROI, but they are more concerned about having integrated business processes than how the technology works. On the other hand integrators are trying to offer their own portfolio wherever it is possible even though some other vendor's equipment would be more beneficial for the customers. However due to special circumstances or environments the integrators have to apply products outside of their portfolio. In large-end projects the integrators are part of an ecosystem when the other participants of the system are often setting boundaries and limiting the freedom of choice concerning the products.

2.2.3 Eco-System

Business ecosystems are often used in technology driven industries. (www.ehow.com 2014) It is a network of the participants involved of the execution of a project through cooperation with each other. Each and every element of the system has an effect on the others and vice versa. (www.investopedia.com 2014) In such a business network the success of individuals is highly dependent on the success of the whole group. The participants of the ecosystem are called actors because they fulfil certain roles. Actors can be customers, society, markets, government, products, stakeholders, organisations, and even processes. The aim of the ecosystem to organise its actors into a comprehensive network that connects them. The performance of the ecosystem can be measured in several ways. The two most significant measurements are productivity and co-evolution. The level of productivity evaluates the performance improvement and the co-evolution measures how the actors work together to improve the performance of the whole ecosystem. A good working ecosystem goes through its four steps evolution. The phase when the actors of the system are collected is called the birth stage. In the expansion stage the system moves towards, after its actors have been collected, a stabile critical mass. Later the focus shifts to the improvement of the ecosystem and finally the self-renewal stage conduce to the birth of a new ecosystem (www.ehow.com 2014)

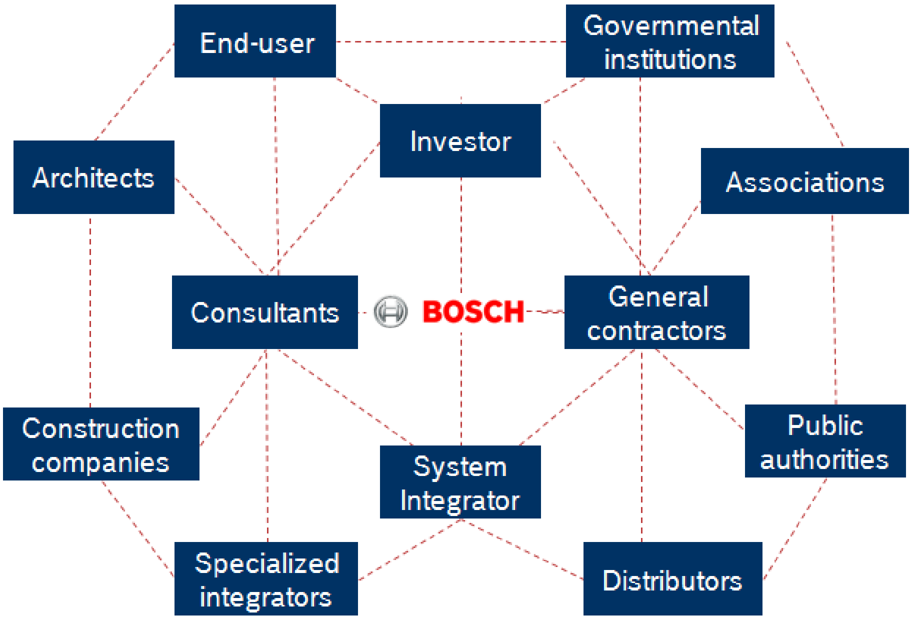


Figure 7 The Ecosystem of Bosch Security Systems (Innovative products, services and solutions for security, safety and communications – internal document 2014)

The ecosystem of Bosch (figure 7) was build to connect with relevant parties in order to facilitate the right match to ensure the best solutions. Bosch situates in the centre of the concentric structured ecosystem. It can be divided into two sections. The first section is the inner circle; Bosch has immediate connection to the investor, consultants, general contractors and the system integrators. Bosch is able to reach out to the outer circle's actors as well, which are involved in the execution of the projects. However the elements of the system might differ by region, organisation or project.

2.3 Key Account Management

Key Accounts are those limited/elite customers, in a business to business environment, that are having a high strategic importance from the selling company's perspective. Key Account Management (KAM) is a loyal relationship between selling company and its key account customers in order to provide them tailor-made product or service package fulfilling their needs. (McDonald M., Millman T. and Rogers B. 1997)

2.3.1 General concept

Looking from a different aspect Key account Management is prioritisation of certain customers in a way that companies differentiates top-tier and bottom-tier customers. While doing so the firm develop different value propositions for its customers. (Philipp Trutmann 2014) Key Account Management is much more than just a certain method of sales, but a mixture of marketing, sales and customer relationship management. (2014) The main tasks of KAM is the coordination of relationships with the customers, strategic planning, management of projects and their supervision and innovative development of opportunities. Therefore an account manager has to have good senses of negotiation, project management and strategic management. With the right set of skills an account manager can build up a loyal relationship with the desired company. Successful cooperation can lead to the following benefits; improved services, communication and coordination, better terms, avoidance of switching costs, customised offerings and co-operation on research and development. The main goals of KAM are increasing turnover, advantages over the competitors and KA retention. (Philipp Trutmann 2014) These goals can be achieved when the focus is rather on building relations than transactions (Table 2)

Transactional Focus	Relational Focus
Single sale	Lifetime value of a customer
Product Features	Customer satisfaction
Tactical promotional campaign	Strategic marketing
Short term reward structure	Varied reward structure
Contact with customer only during sale	Continuous customer contact
Limited point of contact /influence	Contact and influence from board room to shop floor
Salesperson guards his access to customer	Team approach to intercompany communication
Limited commitment	Extensive commitment
Quality policed by quality control	Quality-by whole team/organisation

Table 2 Comparison of characteristics of transactional and relational focus (Macdonald, Rogers and Woodburn 2000 Key Customers: How to manage them profitably)

There are several steps that are leading to achieving the level of KA relationship. First of all the key accounts have to be identified. When identifying potential KA partner the following factors should be taken under consideration; the firm can be a prospect of becoming a life time customer if nurtured, it has high switching costs, for the firm high quality is more important than the difference in price and appreciates long-term relationships and loyalty to brands. When key account agreement has been made it is essential to prepare an accurate key account plan. A key account plan is created individually for each KA by the KAM team. Leader of the KAM team is a key account specialist who has the most know-how about the partner firm. During the implementation of the plan it is essential to involve the top management and have a common understanding of the KA and the concept companywide. The plan should include short and long term targets, timelines and action plans. Regular evaluation of execution of the KA plan leads to better performance and building up trust with the customer. Successful operation with key accounts requires a decent CRM system that provides access internally to the resources. (Preeta H Vyas 2012) The main advantage of key accounts is that, in general, 80% of the revenue comes from the 20% top customers. (Philipp Trutmann 2014) When KA is nurtured its purchasing volume is increasing along with the amount of shared investment. As the relationship with the KA is evolving the knowledge about the needs of the customer is getting wider, therefore it gives the ability to offer more customised services. Despite all the benefits there are risks involved. A downturn of the economy alongside with the demand, price pressure and appearance of new technologies can risk a KA relationship. Furthermore maintaining such a partnership can be often challenging. Depending on the complexity of the processes they might cause delays that can be avoided by simplifying processes. The key account teams should have up to date information and a common understanding of processes in order to avoid conflicts within the organisation. With the usage of the information technology in practise of KAM is getting more convenient for both parties. (Preeta H Vyas 2012)

2.3.2 Key Account Management at Bosch Security

Before establishing KAM the relationship between Bosch and the partners were handled on a local level. As the market has changed the demand from the partner companies has risen to have a global or regional agreement that conducts the prices overall. These companies are mostly security system integrators however Bosch has a few multinational security equipment distributor key accounts. The main difference between distributors and system integrators is that distributors deliver all kind of security equipment needed for a project to the installer. Therefore they have a comprehensive knowledge in security, safety and communication products. Contrarily system integrators have board technical knowledge, offer project engineering and service for security, safety and communication solutions, furthermore specific software and system integration. They have the capability to handle large-scale, complex project therefore they prefer to purchase directly from the manufacturer.

A company can be a potential key account if it is active in more than six countries and has a stipulated amount of annual security relevant purchasing volume. From these data it will be decided whether a company will be handled as a global or regional key account. Global key accounts are those firms that's operation is globally relevant for Bosch. In some cases despite the fact that a company operates globally for Bosch it might remain only as regional key account since its operation is relevant enough in that one particular region. Generally system integrators and distributors with regionally (EMEA, Asia-Pacific, North-America, and Latin-America) high relevance are the regional key accounts. (Key Account management 2013) Purely national accounts with strategic relevance with no or limited international activities are the local key accounts. (Key Account Prioritization 2013) Similarly to the categorization of the KAs Bosch has implemented a structure of KAM. Local key account managers are responsible for developing and executing local KA strategies and negotiation terms and conditions. Furthermore executing regional and global account strategy and taking care of the deployment of terms and conditions. Regional key account managers are monitoring and evaluating the growth of the local key accounts in order to find the potential regional key accounts, moreover developing regional KA strategy and the functional co-ordination of the local KAMs. Global key account managers are responsible for the preparation of the global KA strategies and the global co-ordination. On global and regional level each KAM team member takes care of multiple key accounts according to their location, language skills and other qualifications. Their most crucial task is the preparation of an Account Plan. This document is partly prepared in advance, however is a living document and subject to change. It acts as an ultimate tool during their operation with the partner company. Successful co-operation can be measured in sales figures and customer satisfaction.

3 Research

The thesis project was suggested by my supervisor during my internship at Bosch Security Systems. The aim of the research is to give a comprehensive overview of the European system integrator market from the view of Bosch in order to see who are the main competitors, potential key account partners and on which markets Bosch should focus on when looking for new key accounts. The data collection was completed during the time of the internship supervised by the Directors of Global Key Accounts.

3.1.1 Research Methods

The purpose of a research is to evaluate and determine with sufficient information to find resolve and answers for questions while going through scientific processes. The purposes of the different research methods can be divided into the following groups: exploratory/ formulative research, descriptive research, diagnostic research and hypothesis research. The aim of the exploratory research is to get new insights into a topic. (Kothari 2004) It is common that a research is conclusion orientated. In this case the goal is to analyze the gathered data and provide a comprehensive conclusion on the research problem. (A. Bryman, E. Bell, 2004, 4) This research can be considered exploratory since the main objective is to get an overview of the security system integrators in Europe and decide whether the hypothesis is true or false. The hypothesis declares that there are still system integrators in the European market that can be potential key accounts for Bosch Security Systems. In order to proof the validity or invalidity of the hypothesis statement, valid market data have to be gathered and analysed. The method of competitive analyses is applied to analyse the gathered data.

The base source of market data was the IHS and IMS Technology researches on system integrators in EMEA region. The information provided in the reports is outdated and their purpose is also different, therefore it was only used as guide during the interviews with the country managers of the local Bosch Security System organisations. Eleven country managers were interviewed during the research. The interviews were conducted via telephone conferences. During the interviews the result of the IHS and IMS researches were shown to the managers and they were asked about how much they agree with the identified top system integrators and their market share. The questions of the interviews can be found in Appendix 1. In all cases they were completely or partly disagreeing with the data from the IHS and IMS researches and based on their local expertise they were modifying the ranking and the market shares of the system integrators. Based upon the information collected from the local experts each country or territory was analysed separately. Furthermore an overall European top list of security system integrators was created in order to get and overview on whether the European market is fragmented or driven by multinational companies.

3.1.2 Geographical Scope of the Research

Western Europe includes Austria, Belgium, Denmark, Finland, France, Germany, Iceland, Ireland, Italy, Luxemburg, Netherlands, Norway, Portugal, Spain, Switzerland and the UK.

From **Eastern-Europe** the research includes Czech Republic, Russian Federation and Poland.

3.1.3 Information sources

The security and safety market is quite a young and complex industry. Defining terms accurately can be challenging since scope of business differs company by company. In the last couple of years the market has gone through a big change due to the permeation of the IP cameras and the appearance of wireless products. It leads to new possibilities in the design, engineering, installation and integration phases. With the fast change of trends it is hard to judge the size market and estimate how it will change in the following years.

There are couple of reports available by IMS and IHS Technology that describe the security and safety market as a whole or some of its parts. They are submitted in every second year. These reports are giving a good overview of the market and its trends however their accuracy is questionable. The reports are analysing the whole market and the regional ones as well. In Western-European countries it is easier to judge the outlook, volume and competitive environment due to the reason that the economies are growing faster and therefore consumption of security and safety products is much higher. Contrarily in Eastern-Europe, Africa and Middle-East where the security and safety industry doesn’t have such a long history as it does in Western-Europe. Eastern- Europe is geographically fragmented therefore the markets of the countries separately are negligibly small. The local markets differ from each other hence it is not possible to lump them together. Due to this reason Albania, Belarus, Bosnia and Herzegovina, Bulgaria, Croatia, Estonia, Greece, Hungary, Latvia, Lithuania, Macedonia, Malta, Montenegro, Republic of Moldova, Romania, Serbia, Slovakia, Slovenia and Ukraine are not analysed in this report.

As mentioned before IHS Technology had created a comprehensive report concerning the system integrators in the World. The report was published in 2014 however it announces the market data from 2013 and predicts the conformation of it till 2018. The report includes competitive analysis about the following countries: United Kingdom and Ireland, France, Germany, Italy, Nordic Countries, Spain and Portugal. I used these competitive analysis as a base of my research and it was discussed with the local key account managers whether IHS research is right or wrong. In most cases the local managers did agree with the ranking of the top ten system integrators within the country. The rest of research I relied on the professional opinion of the local key account managers. They were separately interviewed by Telco and they were asked how they see system integration market and its key players and their market share. Based upon that and the knowledge gained about the system integrators the analysis of the market could be completed. The concept of the analysis was to find those system integrators that are relevant locally, operate in different countries and have the potential to grow bigger and become a key account of Bosch.

4 Results of the research

The following chapter includes the results of my research on system integrators in EMEA market. The collected data is party based on the IHS Technology 2014 Security System Integration – World- 2014 report and partly on interviews with the country managers of Bosch Security Systems. The research of UK and Ireland, France, Germany, Italy, Nordic countries, Spain and Portugal are based on the above mentioned research. Austrian and Swiss system integrators were ranked separately, but they are analysed under the same chapter due to the reason that they are operate together within the Bosch organisation.

In the following subsections can be found the analysis of the competitive environment of each country. The tables below illustrate the top five or ten system integrators in each region and their market share within the local market. Below the ranking the estimated market size and market share compared to EMEA as a whole. The estimated market size was calculated from multiple relevant reports about the safety and security industry.

4.1 Overview of Europe

The European market is driven by mostly multinational companies that are operating in most of the countries. In addition many of them are leading and having significant presence in multiple regions. Siemens Building Technologies is has scored number one in three of the analysed countries and was ranked within the top ten in six other markets. Its average market share is high which indicates that its relevance on a European level is inevitable. However Bosch Security Systems only made it in three regions into the top ten system integrators though its average market share is higher than Siemens’. Tyco has a consistent performance in Europe. It scored number one in three of the countries. Since those markets are highly fragmented it is not surprising that Tyco’s market share remains lower than the others’. Similarly to Bosch G4S has also high average market share however it is only present in three countries. However Table 3 well summarises the key players of the European market the relevance of the System Integrators can be judged better on a regional level.

System Integrator	Number of presence in the top 10	Average market share
Siemens Building Technologies	9	12.18%
Tyco Fire & Security	8	6,35
Stanley Convergent Security Solutions	6	7,58
Honeywell Building Solutions	5	5,38%
Bosch Security Systems	3	12,80%
PKE	3	8,60%
G4S Technology	3	9,37%
Johnson Controls	3	3,90%
KABA	3	2,40%
SPIE	2	3,40%
Total worth of market:		**19.000.000.000 €**

Table 3 Summary of the top system integrators in Europe

4.2 Austria and Switzerland

The Austrian and Swiss markets are quite similar to each other. Both are highly fragmented and lead by multinational companies, however few of the local firms are able to compete with the integrator giants on a local level. Siemens Building Technologies is strongly leading both markets with an extremely high market share. In Austria Siemens is followed by PKE. Its presence in Austria is much more significant due to the reason that it is based in Vienna. PKE is the only local-based company from this region that operates in several countries and executes projects in more than 30 locations in the world. The rest of the local based companies in the Austrian and Swiss market are not doing any international business and focusing on the specific needs of the local environment.

Austria	Switzerland

Rank	Name	Market share
1	Siemens Building Technologies	20,0%
2	PKE	20,0%
3	Bosch Security Systems	15,0 %
4	SIS Austria	5,0%
5	Redpuls GmbH	1,0%
Worth of the market:		**760.000.000 €**

Rank	Name	Market share
1	Siemens Building Technologies	40,0%
2	Tyco Fire & Security	20,0%
3	Alpiq AG	5,0%
4	PKE	1,0%
5	Gesitrel AG	1,0%
Total Market share:		**3,97%**

Table 4 Ranking of System Integrators in Austria and Switzerland

4.3 Benelux Countries

The Benelux market is lead by ten system integrators that operate over the borders of the area. The key players of the market are similar to the German, however the market shares and the ranking is significantly different. Siemens Building Technology is leading the market with 7.3%. The difference between the market shares of the system integrators is quite low. It indicates that the market is changing quickly and it is a very competitive environment.

Rank	Name	Market share
1	Siemens Building Technologies	7,3%
2	Cofely Fabricom	6,4%
3	Ajax Chubb Varel	5,9%
4	Trigion	4,9%
5	Tyco Fire & Security	4,6%
6	ADT	4,4%
7	G4S Technology	3,9%
8	Bosch Security Systems	3,4%
9	Imtech	2,9%
10	Niscayah (Stanley)	2,9%
Worth of the market		**1.000.000.000 €**
Total market share:		**5,35%**

Table 5 Ranking of System Integrators in the Benelux Countries

4.4 France

More than half of the top ten system integrators are French-based companies, but only two of them are only operating within the borders of France. The French market is lead by the big global players like Tyco and UTC, however on the third place already a French-based company. On the market the presence of the electrical contractors is significant. They offer installation, integration and maintenance of the third party security equipment. The French market is quite balanced there are no conspicuously high market shares within the top ten integrators. Most of the companies have the know-how for video systems, access control and intrusion installation and maintenance. However Stanley and Onet Security offers guarding and monitoring services as well.

Rank	Name	Market share
1	Tyco Fire & Securyit	8,4%
2	UTC Building& Industrial Systems	8,2%
3	SPIE	5,4%
4	Scutum Group	5,4%
5	Stanley Convergent Security Solutions	4,8%
6	Gunnebo	4,5%
7	ERYMA	3,9%
8	Onet Security Telem	3,1%
9	Cegelec	3,0%
10	Bouygues Energies & Services	2,8%
Total worth of market:		**2.200.000.000 €**
Total market share:		**11,41%**

Table 6 Ranking of System Integrators in France

4.5 Germany

The German market's top 10 players are mostly German-based companies so it is not surprising that Siemens and Bosch are leading the list with an extremely high market shares. Bosch and Siemens are together are accounted over 40% of the market. The rest of the market is highly fragmented. However the German market is one of the most dynamic in Europe, it is surprising that not only multinational companies could keep up with the competition. Next to the giants, Tyco, UTC, Honeywell and Stanley, there are several German-based companies on the market e.g. Interflex, Primiron AG and Securiton. These firms are having significant presence on the access control and video systems market. Their geographic scope includes Germany and its neighbouring countries e.g. Netherlands, Belgium, Switzerland and France. KABA is the odd on the list since it only focuses on access control, but on a global level. The whole German market is the biggest one in the EMEA region therefore the key players of the German market are significant on a regional level as well.

Rank	Name	Market share
1	Siemens Building Technologies	21%
2	Bosch Security Systems	20%
3	Tyco Fire & Security	6,6%
4	KABA	2,2%
5	UTC Building& Industrial Systems	2,1%
6	Interflex	1,8%
7	Honeywell Building Solutions	1,8%
8	Primion AG	1,7%
9	Securiton	1,7%
10	Stanley Convergent Security Solutions	1,4%
Total worth of market:		**3.200.000.000 €**

Total market share:	16,73%

Table 7 Ranking of System Integrators in Germany

4.6 Italy

The Italian market is lead by SELEX which is an Italian-based however it has branches in 11 foreign countries. SELEX is followed by a local company that has two times higher market share than the big multinational competitors in the domestic market. The presence of the multinational system integrators, such as Tyco, Honeywell, Siemens and Standly, and the local ones, like Azitea SpA, Consorizo Nazionale Sicurezza Scarl and Sistemi Integrati Srl, is balanced. In Italy the market is highly fragmented. It is proven by the fact that the top ten integrators altogether accounted only 37% market share.

Rank	Name	Market share
1	SELEX ES	11,1%
2	Azitea SpA	8,8%
3	Tyo Fire and Security	3,4%
4	Honeywell Building Solutions	3,4%
5	Siemens Building Technologies	2,5%
6	Stanley Convergent Security Solutions	2,1%
7	Project Automation SpA	2,1%
8	KABA	1,2%
9	Consorizo Nazionale Sicurezza Scarl	1,0%
10	Sistemi Integrati Srl	1,0%
Total worth of market:		**1.000.000.000 €**
Total market share:		**5,23%**

Table 8 Ranking of System Integrators in Italy

4.7 Nordic Countries

The market of the Nordic countries is the least fragmented. Most of the top five system integrators are multinational companies. The only local-based company is Bravida Saekerhet, from Stockholm and operates is Sweden, Denmark and Norway. Most of the multinational companies offer comprehensive product portfolios and system integration. Unlike Bravida that is more focused on security and HVAC system integration of commercial, public and residential buildings. Altogether the top five accounted more than 62% of the market.

Rank	Name	Market share
1	Stanley Convergent Security Solutions	23,4%
2	G4S Technology	20,2%
3	Bravida Saekerhet	16,9%
4	KABA	3,8%
5	Tyco Fire & Security	1,3%
Total worth of market:		**1.320.000.000 €**
Total market share:		**6,9%**

Table 9 Ranking of System Integrators in the Nordic Countries

4.8 Spain and Portugal

Prosegur, a Spanish guarding services provider and global system integrator leads the Iberian market followed by the multinational giants: Tyco, Honeywell and Stanley. Indra is a Spanish based system integrator with a focus of IT that has expanded its market to most of the EU countries, Australia, China, Philippines, USA and Latin-America. Pysec Seguridad and Drolet are also Spain-based companies. Dorlet extended its market to France and the United Arab Emirates. At the moment many of the Iberian companies expand their business towards Latin-

America due to the current economical recession in the area. The Iberian market is less fragmented than the others just like the Nordic.

Rank	Name	Market share
1	Prosegur	19,4%
2	Tyco Fire & Security	7,9%
3	Honeywell Building Solutions	7,1%
4	Stanley Convergent Security Solutions	7,0%
5	Indra	5,4%
6	Pysec Seguridad	4,2%
7	UTC Building& Industrial Systems	4,1%
8	Siemens Building Technologies	2,8%
9	Dorlet	2,0%
10	Gunnebo	1,8%
Total worth of market:		**840.000.000 €**
Total market share:		**4,38%**

Table 10 Ranking of System Integrators in Spain and Portugal

4.9 United Kingdom and Ireland

The market of the UK and Ireland is one of the biggest in Europe and grows the fastest currently. Its market share is the second biggest and many of the multinational system integrators a placing their global or European headquarter in the area. Being a leader in the UK market is strong advantage therefore system integrators compete neck and neck. The market is lead by Tyco with 9.5% market share followed by UTC with 9.2% share. All of the market leader system integrators are multinational companies proved great success in many other regions of Europe as well. The top ten system integrators are accounted for 38% market share that indicates that the market is highly fragmented.

Rank	Name	Market share

1	Tyco Fire and Security	9,5%
2	UTC Building & Industrial Systems	9,2%
3	G4S Technology	4,0%
4	Stanley Convergent Security Solutions	3,9%
5	Honeywell Building Solutions	3,5%
6	Siemens Building Technologies	3,0%
7	Quadrant Security Group	1,7%
8	SPIE	1,4%
9	Romec Ltd.	1,3%
10	Johnson Controls	1,1%
Total worth of market:		**3.150.000.000 €**
Total market share:		**16,50%**

Table 11 Ranking of System Integrators in United Kingdom and Ireland

4.10 Czech Republic

On the Czech market the presence of the local companies is significant. The market is lead by Trade Fides, based in Brno, which operates only within the border of Czech Republic. The reason for its great success is that Trade Fides has tight connections to the state government and executing large-scale projects across the country. The following four companies are all multinational companies. Cofely operates only in Czech Republic under this name but it is owned by GDF-Suez therefore it can be also considered as a multinational company. Except Securitas, the rest of the system integrators are Czech-based and most of them are not operating outside of the country. However Sitel is expanded its operation towards the Hungarian, German, Polish, Russian, Slovakian and Ukrainian markets. The top ten system integrators are only accounted for 29% market share. It indicated well how fragmented the market is.

Rank	Name	Market share
1	Trade Fides	9,0%
2	Siemens Building Technologies	5,0%
3	Cofely	3,0%

4	Johnson Controls	2,0%
5	Tyco Fire & Security	2,0%
6	Colsys	2,0%
7	Sieza	2,0%
8	EZH	2,0%
9	Sitel	1,0%
10	Securitas	1,0%
Worth of the market		**170.000.000 €**
Total market share:		**0,89%**

Table 12 Ranking of System Integrators in Czech Republic

4.11 Poland

The Polish market is one of the biggest in Europe therefore it is not surprising that key players of the market are local companies although few of the multinational system integrators are also present. Therefore it is not surprising that Qumak Secom is the market leader system integrator that is based in Warsaw and it operates within the borders of Poland. It is followed by Honeywell, Johnson Controls and Siemens that are competing with such locally strong companies like Coral, T4B or Maxto. Tyco is represented by Agis in the Polish market. Its operation is separated from Tyco but they work together with tight cooperation. Agis is also present in the Hungarian, Finnish and Greek markets. Sprint, Maxto as well as Qumak-Sekom started as structural cabling companies with telecom, entering quickly and strongly the security industry from the moment onwards that IP became more and more part of the industry. Coral is one of the largest traditional security and safety integrator, who successfully adapted the IP-technology, now dominating the CCTV industry. The market share of the top ten system integrators is almost 80%.

Rank	Name	Market share
1	Qumak Secom	14,8%
2	Honeywell Building Solutions	11,1%

3	Sprint S.A.	11,1%
4	Johnson Controls	8,6%
5	Siemens Building Technology	8,0%
6	Agis	7,4%
7	Maxto	5,5%
8	PKE	4,9%
9	Coral	4,3%
10	T4B	3,7%
Worth of the market		**6.600.000,00 €**
Total market share:		**3,44%**

Table 13 Ranking of System Integrators in Poland

4.12 Russia

The market of Russia differs from the rest of the Europe's. Although geographically the size of the market is huge, its relevance within the EMEA market is less significant. The reason is that after the economical recession the Russian economy is recovering slowly. Though the multinational companies are mostly present in Russia the top ten system integrators on the market are Russian companies. They mainly targeting the local market however they often operate in the neighbouring countries and in the post soviet countries. Despite the fact that they operate very successfully in Russia their relevance in other countries is questionable. The market is highly fragmented due to the reason that the size of the country makes it challenging to establish strong presence in all parts of Russia. The top ten system integrators in the market are only accounted for 32% market share.

Rank	Name	Market share
1	CROC	6,0%
2	Asteros	5,9%
3	LANIT	5,5%
4	ARMO Group	4,1%

5	Technoserv	2,9%
6	Nvision	2,6%
7	BCC	1,8%
8	Eleron	1,3%
9	Bezopasnost	1,3%
10	IT Group	1,2%
Worth of the market		**1.380.000.000 €**
Total market share:		**7,21%**

Table 14 Ranking of System Integrators in Russia

4.13 Possibilities to develop new KA relationships

By the regulation of Bosch, a key account has to have turnover potential of several millions, active in minimum six countries and significant presence in those. After analysing the local system integrator markets and taking under consideration the key account requirements there were few companies found that have the potential to become a KA for Bosch. The three chosen companies are SPIE, SELEX ES and KABA. None of them are traditional kind of security companies and they partly or not at all producing security equipment.

SPIE is a French company offering multi-technical solutions in the field of communication and energy. It is active in 34 countries globally and generated 4.5 million euro revenue in 2013. SPIE focuses on four business areas: smart city, e-efficient buildings, energies and industrial services. Majority of the projects are executed in the verticals of transportation, commercial and public buildings and utilities. During the smart city and e-efficient buildings projects they often integrate security equipment, mostly access control devices and fire detectors. Since SPIE does not produce security equipment therefore they purchase from a third party. (SPIE official website) Based on the above mentioned facts it can be said that SPIE does fulfil the key account requirements since its annual turnover can be measured in millions, operates in more than 30 countries and its presence is significant in some of the big markets in Europe. SPIE ranked number 8 on the UK market with 1.4% market share, number 3 in the home market, France and number 4 in the Nordic countries with the market share of 3.8%. As well as Bosch, SPIE executes many large-scale projects in the transportation vertical within that specialised on airports. Therefore with a good KA relationship Bosch could get involved into more airport project. Relationship with the smart city division would be also beneficial for both parties. Bosch could provide training on video systems in order to have city surveillance and traffic control cameras included in the smart city offering of SPIE. Based on the market trends it is likely that IT integrators will get involved into the security and safety market. Since SPIE's e-efficient building division offers IT integration Bosch would have the possibility to get involved in IT integration before the competition does.

The Swiss company KABA operates in 60 countries with an annual profit of 70 million EUR in fiscal year 2013. KABA offers access control integration and key systems. The product portfolio includes traditional and smart keys, NFC (Near Field Communication) technology for access control, physical access control and one-way interlocks. The focus areas of business are airports, hospitality and commercial buildings. (KABA official website) Having similar key verticals Bosch can be the base of a beneficial cooperation. Deep integration of video systems and other Bosch equipment can support the offering of KABA.

SELEX ES is an Italian company specialised on homeland security and critical infrastructure. Subsidiaries can be found in 11 countries that generated 3200 Million EUR revenue in fiscal year 2013. SELEX's product and service portfolio is comprehensive. Its security system integration business focuses on airports, stadiums, prisons and industrial plants. When executing large-scale projects SELEX uses both proprietary and third party equipment. They integrate video systems, access control, intrusion detectors and communication systems. (SELEX ES official website) SELEX is number one on the Italian market with 11.1% market share, number 3 on the French market with 5.4% market share and number 8 on the UK market. Therefore it can be said that the international presence of the company is significant furthermore it fulfils all the criteria of key accounts. Since SELEX is purchasing most of the traditional kind of security equipment from third parties it would be a great opportunity for Bosch to step in and become the preferred supplier for all the high-end integration projects.

Bosch should approach system integrators that are in different channels, than the traditional security integrators. Based on the latest market trends finding a new niche on the market can be a huge competitive advantage especially when building up relationship with IT and electrical system integrators.

5 Conclusion

The aim of the research was to map the European system integrator market and find out whether there are still security companies on the market that could be potential key account partners for Bosch.

Key account management is relatively new at Bosch and its size is limited. However it has plenty of global and regional key accounts. KAM is important for the organisation therefore an aligned and strong implemented strategy with goals cohesive throughout the KA's organisation will positively influence the success of key account management. In order to do so the investment of time, capital, human resources, support and training is essential.

The research made it visible that the market is highly fragmented and blurred. Information resources and the reliability of the information are limited. It seems that in the Western-European countries the marked is more developed and that the multinational system integrators are more dominant in there. In these areas the market data is more accurate due to the reason that information on the big Western-European market can help to make strategic decisions. The Central- and Eastern- European markets are less structured therefore almost no reliable statistics are available. Due to that reason it is really hard to find regional, and impossible to find global, key account partners on the security system integrators market. The research has shown that on one hand, Bosch has already KA relationship with numerous multinational system integrators. On the other hand, the ones that Bosch has no connection to they are mostly competitors or so called "local heroes" that are relevant in few areas. Despite there were three companies found that are having the potential to become a key accounts. Beside them the market trends has shown that IT integrators are about to enter to the security market and putting the system integration to a next level. Therefore for Bosch it would be important to start to develop a strategy when approaching the IT integrators.

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APPENDICES

APPENDIX 1. Interview Questions for country managers

1. Do you think that the ranking of top 10 (or 5) system integrators depicted in the IHS report are in balance with the current situation?
2. If no, then how would you modify the order of system integrators?
3. Are there any other system integrators that should be mentioned on the top 10 (or 5) list? If so then how would you rank them?
4. Do you think that the market share given by the IHS report is realistic?
5. If no, then how would you modify them and why?